Hoechst Celanese

Hoechst

"Hydro-T"

VIRTEX®D

Concentrated Sodium Hydrosulfite

Pallett #5

Virginia Chemicals Company
801 Water Street
Portsmouth, VA 23704

MATERIAL SAFETY DATA SHEET

Information Telephone: 804/393-3100 Emergency Telephone: 804/484-5000 CHEMTREC Telephone: 800/424-9300

I. IDENTIFICATION

PRODUCT NAME:	VIRTEX®D Concentrated Sodium Hydrosulfite	REVISION DATE:	8/88
CHEMICAL NAME:	Sodium Hydrosulfite	FORMULA:	$Na_2S_2O_4$
SYNONYMS:	Sodium Dithionite	MOLECULAR WEIGHT:	174.06
D.O.T. HAZARD CLASS:	Flammable Solid	UN No. 1384	CAS No. 7775-14-6
D.O.T. SHIPPING NAME:	Sodium Hydrosulfite See page 4 for IMO infomation	CAS NAME:	Dithionous acid, Disodium salt

II. PHYSICAL DATA

PHYSICAL STATE:	Solid	DENSITY, BULK, g/cc:	0.8 (loose); 1.02 (packed)
MELTING POINT, °C:	Decomposes below melting point	SOLUBILITY IN WATER, wt. %:	18 at 20° C
DECOMPOSES, °C:	70-130	VOLATILES, VOLUME %:	None
APPEARANCE:	White Powder	ODOR:	Slight Sulfur Dioxide Odor

III. HAZARDOUS COMPONENTS

COMPONENT	CAS NO	%	EXPOSURE LIMITS		
			OSHA PEL	ACGIH TLV	OTHER
Sodium Hydrosulfite	7775-14-6	90	None Est.	None Est.	Hoechst Celanese 5 mg/m³ - TWA 8 15 mg/m³ - 30 min excursion
Sodium Metabisulfite	7681-57-4	3-7	None Est.	5 mg/m³	5 mg/m³ TWA 8
Sodium Thiosulfate	7772-98-7	1	None Est.	None Est.	None
Sodium Formate	141-53-7	1	None Est.	None Est.	None

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT, °C: Not Applicable	FLAMMABLE LIMITS, IN AIR, Vol. %	LEL:	UEL: No Information Available

NORMAL EXTINGUISHING AGENT:

WATER IN LARGE QUANTITIES.

SPECIAL FIRE FIGHTING PROCEDURES If a decomposition is suspected in a sealed container (hot to the touch or pressure deformed), vent container by the safest means possible. Move vented container to a safe, open area. Empty, flood material with water; contain all water. (See Sections VII and VIII.) Sand or sodium carbonate (dry chemical) will not stop decomposition reactions. Burning or smoking material must be cooled with large quantities of water to stop the decomposition reaction.

UNUSUAL FIRE AND EXPLOSION HAZARDS Contact with small amounts of water or moist air will cause a chemical decomposition reaction. Heat generated is sufficient to ignite combustible material. If fire code requires sprinklered storage, protect by covering with plastic. Promptly remove and inspect containers which are accidentally wetted. (See previous paragraph.)

V. REACTIVITY DATA

STABLE:	CONDITIONS TO AVOID:
Yes	Heat over 50° C; Moisture.
UNSTABLE: No	

INCOMPATIBILITY (Materials to Avoid):

Oxidizing agents, acidic materials, moisture.

HAZARDOUS COMBUSTION OR HAZARDOUS DECOMPOSITION PRODUCTS: A major decomposition product is sulfur dioxide; however, during catastrophic decomposition other sulfur containing decomposition products such as hydrogen sulfide and mercaptans may be present.

HAZARDOUS POLYMERIZATION CONDITIONS TO AVOID:

Not applicable

CORROSIVE TO METAL:	OXIDIZER:
No Information	No

VI. HEALTH HAZARD DATA

EFFECTS OF SINGLE OVEREXPOSURE (ACUTE)

INHALATION: May cause respiratory irritation and bronchospasms. Symptoms may include coughing and breathing difficulty. May cause severe respiratory distress in asthmatics. Asthmatics or persons with other respiratory disorders should be excluded from exposure.

SKIN CONTACT: May cause severe irritation. Necrosis observed in one skin irritation study of laboratory animals (rabbits).

SKIN ABSORPTION:

Practically non-toxic. LD_{50} (Rabbits) greater than 10,000 mg/kg.

SWALLOWING: May cause mouth, throat, esophagus irritation or burns. May cause gastrointestinal disturbances. LD_{50} (Rats) greater than 500 mg/kg (slightly toxic). May cause sensitization in individuals allergic to sulfites.

EYE CONTACT:

May cause moderate to severe eye irritation.

EFFECTS OF REPEATED OVEREXPOSURE (CHRONIC)

See acute inhalation hazards.

OTHER HEALTH DATA: Sulfur dioxide decomposition product may cause pulmonary irritation, bronchospasms, respiratory failure due to pulmonary edema.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE

Asthma, respiratory disease.

EMERGENCY AND FIRST AID PROCEDURES

SWALLOWING: Remove from exposure. If appreciable quantities are ingested, seek medical assistance.

SKIN: Remove contaminated clothing and wash affected area thoroughly with soap and water until clean. Wash clothing thoroughly before reuse.

INHALATION: Remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, administer cardiopulmonary resuscitation. Seek medical assistance immediately.

EYES:

Flush with water for at least 15 minutes. Obtain medical assistance.

OTHER:

No information

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VII. – ENVIRONMENTAL DATA

ENVIRONMENTAL TOXICITY DATA:

Causes rapid oxygen depletion of surface water.

SPILL OR LEAK CONTROL PROCEDURES:

Contain to minimize contaminated area. Recover as a dry material. Discarded unreacted material is a hazardous waste because of reactivity with moisture. Keep out of ground and surface waters.

HAZARDOUS SUBSTANCE SUPERFUND: No RQ (lbs.): None assigned

WASTE DISPOSAL METHOD:

Dispose of solid material in a hazardous waste treatment facility in compliance with local, state and federal regulations. Dispose of water solutions of the material in industrial wastewater treatment system or otherwise as allowed by local, state or federal regulations.

HAZARDOUS WASTE 40CFR261: Yes HAZARDOUS WASTE NUMBER: D-003

CONTAINER DISPOSAL METHOD:

Remove liner, triple rinse with water, discard with industrial non-hazardous trash. Triple rinse drum with water. May be discarded with industrial trash or to a drum reclaimer. Drums are not authorized for reuse for DOT hazardous materials.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Use NIOSH/MSHA approved respirator with acid gas cartridge and dust prefilter for concentrations up to 10 times the recommended exposure limit. For higher concentrations, as well as for firefighting and other emergencies, use positive pressure, self-contained breathing apparatus.

PROTECTIVE GLOVES:	EYE PROTECTION:
Use neoprene or other impermeable gloves where skin contact is likely.	Chemical goggles. Do not wear contact lenses.
VENTILATION:	**SPECIAL EQUIPMENT:**
Use local exhaust to control dust within the recommended exposure limits.	Work clothing to cover exposed areas. Safety shower and eyewash facilities.

IX. SPECIAL PRECAUTIONS

HANDLING AND STORING:

Keep stored material dry and at temperatures below 50° C. DO NOT store containers open to the air. Keep the container tightly covered when material is not in use. Separate containers from oxidizers, acids and flammable materials. Avoid sources of heat or flame.

OTHER:

LABEL CODE: 3-305

If the container wall feels hot or if the container begins smoking, remove the container to an open area, remove material, flood with water, contain run-off. Remove damaged or punctured containers from storage, secure any leaks and use product immediately or secure leaks, observe container for signs of product decomposition (container hot to the touch).

X. ADDITIONAL INFORMATION

OTHER REACTIVITY INFORMATION

Exposure to moisture either from humid air or from small amounts of water can result in spontaneous chemical reactions which may generate sufficient heat to initiate thermal decomposition. Heat above 50°C can also initiate thermal decomposition.

Moisture catalyzes the exothermic decomposition of sodium hydrosulfite to form a mixture of sulfur compounds, including sodium sulfate and sulfur. While decomposition reactions may occur in the absence of air, the presence of oxygen significantly increases the decomposition reaction rate of moist hydrosulfite, generating heat considerably faster than it can be dissipated. The heat generated by this reaction has the potential to raise the temperature of the material above the thermal decomposition point (130°C). This results in rapid, exothermic decomposition to sulfur dioxide, sodium bisulfite, sodium sulfite and sodium thiosulfate. In the presence of air additional reactions will take place: elemental sulfur which is produced by the decomposition may ignite, resulting in a sulfur fire which generates additional quantities of sulfur dioxide.

NOTE: Sulfur dioxide has a reportable quantity (RQ) of one pound under SARA Section 302/304.

Sodium hydrosulfite decomposition reactions and fires can be controlled only by reducing the temperature to below the point necessary to maintain decomposition. **WATER IN LARGE QUANTITY IS THE ONLY EFFECTIVE EXTINGUISHING AGENT FOR SODIUM HYDROSULFITE DECOMPOSITION REACTIONS AND FIRES.**

OTHER REGULATORY INFORMATION

SARA Section 302 (Extremely Hazardous Substance) List:	None of the substances listed on page 1, Section III are regulated by SARA Section 302/304.
SARA Section 311/312 Hazard Categories:	Immediate Health Hazard; Fire Hazard; Reactivity Hazard.
SARA Section 313 (Toxic Chemical) List:	None of the substances listed on page 1, Section III are regulated by SARA Section 313.
TSCA Inventory Status:	All substances listed on page 1, Section III are on the TSCA Inventory.

International Maritime Organization

IMO Shipping Name:	Sodium Dithionite
UN Number:	1384
Class:	4.2, Spontaneously Combustible
IMDG Code Page:	4122